

LMC: 03/09/04 23-66882 12575-E CON 255517

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re application of:**

Anna Gutowska and Karol J. Krzyminski

**Application No.** 10/701,053

**Filed:** November 3, 2003

**Confirmation No.** Not yet assigned

**For:** MULTIPLE STIMULUS REVERSIBLE  
HYDROGELS

**Examiner:** Not yet assigned

**Art Unit:** Not yet assigned

**Attorney Reference No.** 23-66882

COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

**CERTIFICATE OF MAILING**

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Attorney  
for Applicant(s)

Date Mailed

3/9/04

**INFORMATION DISCLOSURE STATEMENT**  
**FOR CONTINUING APPLICATIONS**

Listed on the accompanying form PTO-1449 are several English-language documents. Applicants respectfully request that such documents be listed as references cited on the issued patent.

The present application relies upon U.S. Patent Application No. 09/603,730, which was filed June 23, 2000, now U.S. Patent No. 6,660,247, for an earlier filing date under 35 U.S.C. § 120. Furthermore, documents listed on the accompanying form PTO-1449 were disclosed to or cited by the Patent Office in the earlier U.S. application.

Copies of the documents listed on the accompanying form PTO-1449 that were cited by applicants in the earlier application need not be sent to the Patent Office pursuant to 37 C.F.R. § 1.98. However, applicants will furnish the Patent Office with such copies upon request.

Copies of documents listed on the accompanying form PTO-1449 that were cited by the Patent Office in the earlier application are enclosed.

Please charge any additional fees that may be required in connection with filing this Information Disclosure Statement, or credit any overpayment, to Deposit Account No. 02-4550.

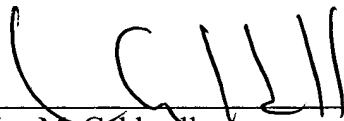
A duplicate copy of this sheet is enclosed.

The filing of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or otherwise material to patentability as defined in 37 C.F.R. §1.56.

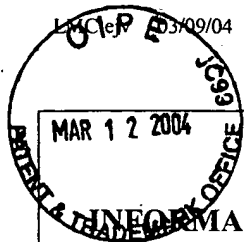
Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By

  
\_\_\_\_\_  
Lisa M. Caldwell  
Registration No. 41,653

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 226-7391  
Facsimile: (503) 228-9446



**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**

<b>Attorney Docket Number</b>	23-66882
<b>Application Number</b>	10/701,053
<b>Filing Date</b>	November 3, 2003
<b>First Named Inventor</b>	Anna Gutowska
<b>Art Unit</b>	Not yet assigned
<b>Examiner Name</b>	Not yet assigned

**U.S. PATENT DOCUMENTS**

<b>Examiner's Initials*</b>	<b>Cite No. (optional)</b>	<b>Number</b>	<b>Date</b>	<b>Name</b>
		4,732,930	3/1988	Tanaka et al.
		5,213,580	5/1993	Slepian et al.
		5,252,318	10/1993	Joshi et al.
		5,256,765	10/1993	Leong
		5,410,016	4/1995	Hubbell et al.
		5,514,379	5/1996	Weissleder et al.
		5,525,334	6/1996	Ito et al.
		5,575,815	11/1996	Slepian et al.
		5,589,568	12/1996	Higashijima et al.
		5,634,946	6/1997	Slepian
		5,662,609	9/1997	Slepian
		5,674,287	10/1997	Slepian et al.
		5,695,480	12/1997	Evans et al.
		5,702,361	12/1997	Evans et al.
		5,749,915	5/1998	Slepian
		5,749,922	5/1998	Slepian et al.

<b>EXAMINER SIGNATURE:</b>	<b>DATE CONSIDERED:</b>
--------------------------------	-----------------------------

\* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				<b>Attorney Docket Number</b>	23-66882
				<b>Application Number</b>	10/701,053
				<b>Filing Date</b>	November 3, 2003
				<b>First Named Inventor</b>	Anna Gutowska
				<b>Art Unit</b>	Not yet assigned
				<b>Examiner Name</b>	Not yet assigned
		5,766,704	6/1998	Allen et al.	
		5,843,156	12/1998	Slepian et al.	
		5,858,746	1/1999	Hubbell et al.	
		5,876,741	3/1999	Ron	
		5,939,485	8/1999	Bromberg et al.	
		5,942,209	8/1999	Leavitt et al.	
		5,976,648	11/1999	Li et al.	
		6,090,911	7/2000	Petka et al.	
		6,113,629	9/2000	Ken	
		6,290,729	9/2001	Slepian et al.	
		6,352,682	3/2002	Leavitt et al.	
		6,443,941	9/2002	Slepian et al.	
		2002/0168319	11/2002	Filler et al.	
<b>FOREIGN PATENT DOCUMENTS</b>					
<b>Examiner's Initials*</b>	<b>Cite No. (optional)</b>	<b>Number</b>	<b>Date</b>	<b>Country</b>	
		EP 0 704217	4/1996	EPC	
		JP 09154573	6/1997	Japan	

EXAMINER SIGNATURE:	DATE CONSIDERED:
* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.	

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>			<b>Attorney Docket Number</b>	23-66882
			<b>Application Number</b>	10/701,053
			<b>Filing Date</b>	November 3, 2003
			<b>First Named Inventor</b>	Anna Gutowska
			<b>Art Unit</b>	Not yet assigned
			<b>Examiner Name</b>	Not yet assigned
		Park et al., "Synthesis, Characterization, and Application of pH/Temperature Sensitive Hydrogels," <i>Proceed. Intern. Symp. Control. Rel. Bioact. Mater.</i> , pp. 112-113, 96 (1990).		

EXAMINER SIGNATURE:	DATE CONSIDERED:
* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.	

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				<b>Attorney Docket Number</b>	23-66882
				<b>Application Number</b>	10/701,053
				<b>Filing Date</b>	November 3, 2003
				<b>First Named Inventor</b>	Anna Gutowska
				<b>Art Unit</b>	Not yet assigned
				<b>Examiner Name</b>	Not yet assigned
		WO 96/03112	2/1996	WIPO	
		WO 97/33628	9/1997	WIPO	
		WO 98/55147	12/1998	WIPO	
		WO 99/55386	11/1999	WIPO	
		WO 99/56783	11/1999	WIPO	
		WO 00/43355	7/2000	WIPO	
		WO 00/45868	8/2000	WIPO	
<b>Examiner's Initials*</b>	<b>Cite No. (optional)</b>	<b>OTHER DOCUMENTS</b>			
		Gutowska et al., "Thermosensitive Polymers for Drug Delivery," <i>American Chemical Society</i> , Vol. 37, No. 2, pp. 115-116 (1996).			
		Ganorkar et al., "Loading and Release Studies Using pH/Temperature-Sensitive Polymers for Oral Protein Delivery," <i>Proceed. Int'l. Symp. Control. Rel. Bioact. Mater.</i> , pp. 501-502 (1998).			
		Hattori et al., "Copolymers containing isopropyl acrylamide for temperature-regulated absorption of nucleic acids during preparation of enzyme," (Abstract).			
		Teramoto et al., "Phase transition for aqueous solution of polyelectrolyte complex containing N-isopropylamide," (Abstract).			
		Chen et al., "Graft Copolymers That Exhibit Temperature-Induced Phase Transitions Over a Wide Range of pH," <i>Nature</i> , Vol. 373, pp. 49-52 (1995).			
		Park, "Temperature Modulated Protein Release from pH/Temperature-Sensitive Hydrogels," <i>Biomaterials</i> , Vol. 20, pp. 517-521 (1999).			
		Zhang et al., "Synthesis and Characterization of pH- and Temperature-Sensitive Poly(methacrylic acid)/Poly(N-isopropylacrylamide) Interpenetrating Polymeric Networks," <i>Macromolecules</i> , pp. A-F (1999).			
		Beltran et al., "Swelling Equilibria for Weakly Ionizable, Temperature-Sensitive Hydrogels," <i>Macromolecules</i> , pp. 549-551 (1991).			
<b>EXAMINER SIGNATURE:</b>			<b>DATE CONSIDERED:</b>		
* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.					